PATENT
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Date: January 11, 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Pennica et al.
Appl. No.	:	Unknown
Filed	:	Filed Herewith
For	:	NOVEL STRA6 POLYPEPTIDES
Examiner	:	Unknown
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Ginger R Dreger, Reg No 33,055

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Washington, D.C. 20231

Dear Sir:

I hereby state that the information recorded in computer readable form is identical to the written sequence listing submitted herewith as required in 37 CFR § 1.821(f) and (g).

I further state that this submission includes no new matter.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: January 11, 2001

By:
Ginger R. Dreger
Registration No. 33,055
Attorney of Record

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011001

SEQUENCE LISTING

<110> Pennica, Diane
Smith, Victoria
Wood, William I.

<120> Novel STRA6 Polypeptides

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Tyr Gly Ser Trp Tyr Ile Asp Glu Pro Gln Gly Gly Glu Glu Leu Gln
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Pro Glu Gly Glu Val Pro Ser Cys His Thr Ser Ile Pro Pro Gly Leu
40 45 50

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Tyr His Ala Cys Leu Ala Ser Leu Ser Ile Leu Val Leu Leu Leu Leu
55 60 65

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Ala Met Leu Val Arg Arg Arg Gln Leu Trp Pro Asp Cys Val Arg Gly
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agg ccc ggc ctg ccc agc cct gtg gat ttc ttg gct ggg gac agg ccc   345
Arg Pro Gly Leu Pro Ser Pro Val Asp Phe Leu Ala Gly Asp Arg Pro
     85                  90                  95

cgg gca gtg cct gct gct gtt ttc atg gtc ctc ctg agc tcc ctg tgt   393
Arg Ala Val Pro Ala Ala Val Phe Met Val Leu Leu Ser Ser Leu Cys
100                 105                 110                 115

ttg ctg ctc ccc gac gag gac gca ttg ccc ttc ctg act ctc gcc tca   441
Leu Leu Leu Pro Asp Glu Asp Ala Leu Pro Phe Leu Thr Leu Ala Ser
                120                 125                 130

gca ccc agc caa gat ggg aaa act gag gct cca aga ggg gcc tgg aag   489
Ala Pro Ser Gln Asp Gly Lys Thr Glu Ala Pro Arg Gly Ala Trp Lys
            135                 140                 145

ata ctg gga ctg ttc tat tat gct gcc ctc tac tac cct ctg gct gcc   537
Ile Leu Gly Leu Phe Tyr Tyr Ala Ala Leu Tyr Tyr Pro Leu Ala Ala
        150                 155                 160

tgt gcc acg gct ggc cac aca gct gca cac ctg ctc ggc agc acg ctg   585
Cys Ala Thr Ala Gly His Thr Ala Ala His Leu Leu Gly Ser Thr Leu
    165                 170                 175

tcc tgg gcc cac ctt ggg gtc cag gtc tgg cag agg gca gag tgt ccc   633
Ser Trp Ala His Leu Gly Val Gln Val Trp Gln Arg Ala Glu Cys Pro
180                 185                 190                 195

cag gtg ccc aag atc tac aag tac tac tcc ctg ctg gcc tcc ctg cct   681
Gln Val Pro Lys Ile Tyr Lys Tyr Tyr Ser Leu Leu Ala Ser Leu Pro
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ctc ctg ctg ggc ctc gga ttc ctg agc ctt tgg tac cct gtg cag ctg   729
Leu Leu Leu Gly Leu Gly Phe Leu Ser Leu Trp Tyr Pro Val Gln Leu
            215                 220                 225

gtg aga agc ttc agc cgt agg aca gga gca ggc tcc aag ggg ctg cag   777
Val Arg Ser Phe Ser Arg Arg Thr Gly Ala Gly Ser Lys Gly Leu Gln
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Ser Ser Tyr Ser Glu Glu Tyr Leu Arg Asn Leu Leu Cys Arg Lys Lys
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ctg gga agc agc tac cac acc tcc aag cat ggc ttc ctg tcc tgg gcc   873
Leu Gly Ser Ser Tyr His Thr Ser Lys His Gly Phe Leu Ser Trp Ala
260                 265                 270                 275

cgc gtc tgc ttg aga cac tgc atc tac act cca cag cca gga ttc cat   921
Arg Val Cys Leu Arg His Cys Ile Tyr Thr Pro Gln Pro Gly Phe His
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Leu Pro Leu Lys Leu Val Leu Ser Ala Thr Leu Thr Gly Thr Ala Ile
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tac cag gtg gcc ctg ctg ctg ctg gtg ggc gtg gta ccc act atc cag   1017
Tyr Gln Val Ala Leu Leu Leu Leu Val Gly Val Val Pro Thr Ile Gln
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aag gtg agg gca ggg gtc acc acg gat gtc tcc tac ctg ctg gcc ggc   1065
Lys Val Arg Ala Gly Val Thr Thr Asp Val Ser Tyr Leu Leu Ala Gly
    325                 330                 335

ttt gga atc gtg ctc tcc gag gac aag cag gag gtg gtg gag ctg gtg   1113
Phe Gly Ile Val Leu Ser Glu Asp Lys Gln Glu Val Val Glu Leu Val
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aag cac cat ctg tgg gct ctg gaa gtg tgc tac atc tca gcc ttg gtc   1161
Lys His His Leu Trp Ala Leu Glu Val Cys Tyr Ile Ser Ala Leu Val
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ttg tcc tgc tta ctc acc ttc ctg gtc ctg atg cgc tca ctg gtg aca   1209
Leu Ser Cys Leu Leu Thr Phe Leu Val Leu Met Arg Ser Leu Val Thr
            375                 380                 385

cac agg acc aac ctt cga gct ctg cac cga gga gct gcc ctg gac ttg   1257
His Arg Thr Asn Leu Arg Ala Leu His Arg Gly Ala Ala Leu Asp Leu
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agt ccc ttg cat cgg agt ccc cat ccc tcc cgc caa gcc ata ttc tgt   1305
Ser Pro Leu His Arg Ser Pro His Pro Ser Arg Gln Ala Ile Phe Cys
    405                 410                 415

tgg atg agc ttc agt gcc tac cag aca gcc ttt atc tgc ctt ggg ctc   1353
Trp Met Ser Phe Ser Ala Tyr Gln Thr Ala Phe Ile Cys Leu Gly Leu
420                 425                 430                 435

ctg gtg cag cag atc atc ttc ttc ctg gga acc acg gcc ctg gcc ttc   1401
Leu Val Gln Gln Ile Ile Phe Phe Leu Gly Thr Thr Ala Leu Ala Phe
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ctg gtg ctc atg cct gtg ctc cat ggc agg aac ctc ctg ctc ttc cgt   1449
Leu Val Leu Met Pro Val Leu His Gly Arg Asn Leu Leu Leu Phe Arg
            455                 460                 465

tcc ctg gag tcc tcg tgg ccc ttc tgg ctg act ttg gcc ctg gct gtg   1497
Ser Leu Glu Ser Ser Trp Pro Phe Trp Leu Thr Leu Ala Leu Ala Val
        470                 475                 480

atc ctg cag aac atg gca gcc cat tgg gtc ttc ctg gag act cat gat   1545
Ile Leu Gln Asn Met Ala Ala His Trp Val Phe Leu Glu Thr His Asp
    485                 490                 495

gga cac cca cag ctg acc aac cgg cga gtg ctc tat gca gcc acc ttt   1593
Gly His Pro Gln Leu Thr Asn Arg Arg Val Leu Tyr Ala Ala Thr Phe
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ctt ctc ttc ccc ctc aat gtg ctg gtg ggt gcc atg gtg gcc acc tgg   1641
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gac ctc agc ctg ctg cca ccg aga gcc gcc act ctc gac ccc ggc tac   1737
Asp Leu Ser Leu Leu Pro Pro Arg Ala Ala Thr Leu Asp Pro Gly Tyr
        550                 555                 560

tac acg tac cga aac ttc ttg aag att gaa gtc agc cag tcg cat cca   1785
Tyr Thr Tyr Arg Asn Phe Leu Lys Ile Glu Val Ser Gln Ser His Pro
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gcc atg aca gcc ttc tgc tcc ctg ctc ctg caa gcg cag agc ctc cta   1833
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ccc agg acc atg gca gcc ccc cag gac agc ctc aga cca ggg gag gaa   1881
Pro Arg Thr Met Ala Ala Pro Gln Asp Ser Leu Arg Pro Gly Glu Glu
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Asp Glu Gly Met Gln Leu Leu Gln Thr Lys Asp Ser Met Ala Lys Gly
            615                 620                 625

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Ala Arg Pro Gly Ala Ser Arg Gly Arg Ala Arg Trp Gly Leu Ala Tyr
        630                 635                 640

acg ctg ctg cac aac cca acc ctg cag gtc ttc cgc aag acg gcc ctg   2025
Thr Leu Leu His Asn Pro Thr Leu Gln Val Phe Arg Lys Thr Ala Leu
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ttg ggt gcc aat ggt gcc cag ccc tga gggcagggaa ggtcaaccca         2072
Leu Gly Ala Asn Gly Ala Gln Pro  *
660                 665

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Pro Gly Leu Tyr His Ala Cys Leu Ala Ser Leu Ser Ile Leu Val Leu
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Val Arg Gly Arg Pro Gly Leu Pro Ser Pro Val Asp Phe Leu Ala Gly
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Asp Arg Pro Arg Ala Val Pro Ala Ala Val Phe Met Val Leu Leu Ser
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Ser Leu Cys Leu Leu Leu Pro Asp Glu Asp Ala Leu Pro Phe Leu Thr
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Leu Ala Ser Ala Pro Ser Gln Asp Gly Lys Thr Glu Ala Pro Arg Gly
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Ala Trp Lys Ile Leu Gly Leu Phe Tyr Tyr Ala Ala Leu Tyr Tyr Pro
145                 150                 155                 160
Leu Ala Ala Cys Ala Thr Ala Gly His Thr Ala Ala His Leu Leu Gly
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Ser Thr Leu Ser Trp Ala His Leu Gly Val Gln Val Trp Gln Arg Ala
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Glu Cys Pro Gln Val Pro Lys Ile Tyr Lys Tyr Tyr Ser Leu Leu Ala
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Ser Leu Pro Leu Leu Leu Gly Leu Gly Phe Leu Ser Leu Trp Tyr Pro
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Val Gln Leu Val Arg Ser Phe Ser Arg Arg Thr Gly Ala Gly Ser Lys
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Gly Leu Gln Ser Ser Tyr Ser Glu Glu Tyr Leu Arg Asn Leu Leu Cys
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Arg Lys Lys Leu Gly Ser Ser Tyr His Thr Ser Lys His Gly Phe Leu
            260                 265                 270
Ser Trp Ala Arg Val Cys Leu Arg His Cys Ile Tyr Thr Pro Gln Pro
        275                 280                 285
Gly Phe His Leu Pro Leu Lys Leu Val Leu Ser Ala Thr Leu Thr Gly
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Thr Ala Ile Tyr Gln Val Ala Leu Leu Leu Leu Val Gly Val Val Pro
305                 310                 315                 320
Thr Ile Gln Lys Val Arg Ala Gly Val Thr Thr Asp Val Ser Tyr Leu
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Leu Ala Gly Phe Gly Ile Val Leu Ser Glu Asp Lys Gln Glu Val Val
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Glu Leu Val Lys His His Leu Trp Ala Leu Glu Val Cys Tyr Ile Ser
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Ala Leu Val Leu Ser Cys Leu Leu Thr Phe Leu Val Leu Met Arg Ser
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Leu Val Thr His Arg Thr Asn Leu Arg Ala Leu His Arg Gly Ala Ala
385                 390                 395                 400
Leu Asp Leu Ser Pro Leu His Arg Ser Pro His Pro Ser Arg Gln Ala
                405                 410                 415
Ile Phe Cys Trp Met Ser Phe Ser Ala Tyr Gln Thr Ala Phe Ile Cys
            420                 425                 430
Leu Gly Leu Leu Val Gln Gln Ile Ile Phe Phe Leu Gly Thr Thr Ala
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Thr His Asp Gly His Pro Gln Leu Thr Asn Arg Arg Val Leu Tyr Ala
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Ala Thr Phe Leu Leu Phe Pro Leu Asn Val Leu Val Gly Ala Met Val
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Ala Thr Trp Arg Val Leu Leu Ser Ala Leu Tyr Asn Ala Ile His Leu
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Gly Gln Met Asp Leu Ser Leu Leu Pro Pro Arg Ala Ala Thr Leu Asp
545                 550                 555                 560
Pro Gly Tyr Tyr Thr Tyr Arg Asn Phe Leu Lys Ile Glu Val Ser Gln
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Ser His Pro Ala Met Thr Ala Phe Cys Ser Leu Leu Leu Gln Ala Gln
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Ser Leu Leu Pro Arg Thr Met Ala Ala Pro Gln Asp Ser Leu Arg Pro
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Gly Glu Glu Asp Glu Gly Met Gln Leu Leu Gln Thr Lys Asp Ser Met
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gaaaggaaag agacaaggaa gggagaggtc aggagagcgc ttgattggag gagaagggcc 180
agaga atg tcg tcc cag cca gca ggg aac cag acc tcc ccc ggg gcc aca 230
Met Ser Ser Gln Pro Ala Gly Asn Gln Thr Ser Pro Gly Ala Thr
1 5 10 15

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Glu Asp Tyr Ser Tyr Gly Ser Trp Tyr Ile Asp Glu Pro Gln Gly Gly
20 25 30

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Glu Glu Leu Gln Pro Glu Gly Glu Val Pro Ser Cys His Thr Ser Ile
35 40 45

cca ccc ggc ctg tac cac gcc tgc ctg gcc tcg ctg tca atc ctt gtg 374
Pro Pro Gly Leu Tyr His Ala Cys Leu Ala Ser Leu Ser Ile Leu Val
50 55 60

ctg ctg ctc ctg gcc atg ctg gtg agg cgc cgc cag ctc tgg cct gac 422
Leu Leu Leu Leu Ala Met Leu Val Arg Arg Arg Gln Leu Trp Pro Asp
65 70 75

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Cys Val Arg Gly Arg Pro Gly Leu Pro Arg Pro Arg Ala Val Pro Ala
80 85 90 95

gct gtt ttc atg gtc ctc ctg agc tcc ctg tgt ttg ctg ctc ccc gac 518
Ala Val Phe Met Val Leu Leu Ser Ser Leu Cys Leu Leu Leu Pro Asp
100 105 110

gag gac gca ttg ccc ttc ctg act ctc gcc tca gca ccc agc caa gat 566
Glu Asp Ala Leu Pro Phe Leu Thr Leu Ala Ser Ala Pro Ser Gln Asp
115 120 125

ggg aaa act gag gct cca aga ggg gcc tgg aag ata ctg gga ctg ttc 614
Gly Lys Thr Glu Ala Pro Arg Gly Ala Trp Lys Ile Leu Gly Leu Phe
130 135 140

tat tat gct gcc ctc tac tac cct ctg gct gcc tgt gcc acg gct ggc 662
Tyr Tyr Ala Ala Leu Tyr Tyr Pro Leu Ala Ala Cys Ala Thr Ala Gly
145 150 155

cac aca gct gca cac ctg ctc ggc agc acg ctg tcc tgg gcc cac ctt 710
His Thr Ala Ala His Leu Leu Gly Ser Thr Leu Ser Trp Ala His Leu
160 165 170 175

ggg gtc cag gtc tgg cag agg gca gag tgt ccc cag gtg ccc aag atc 758
Gly Val Gln Val Trp Gln Arg Ala Glu Cys Pro Gln Val Pro Lys Ile
180 185 190

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Tyr Lys Tyr Tyr Ser Leu Leu Ala Ser Leu Pro Leu Leu Leu Gly Leu
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Gly Phe Leu Ser Leu Trp Tyr Pro Val Gln Leu Val Arg Ser Phe Ser
        210                 215                 220

cgt agg aca gga gca ggc tcc aag ggg ctg cag agc agc tac tct gag   902
Arg Arg Thr Gly Ala Gly Ser Lys Gly Leu Gln Ser Ser Tyr Ser Glu
    225                 230                 235

gaa tat ctg agg aac ctc ctt tgc agg aag aag ctg gga agc agc tac   950
Glu Tyr Leu Arg Asn Leu Leu Cys Arg Lys Lys Leu Gly Ser Ser Tyr
240                 245                 250                 255

cac acc tcc aag cat ggc ttc ctg tcc tgg gcc cgc gtc tgc ttg aga   998
His Thr Ser Lys His Gly Phe Leu Ser Trp Ala Arg Val Cys Leu Arg
                260                 265                 270

cac tgc atc tac act cca cag cca gga ttc cat ctc ccg ctg aag ctg   1046
His Cys Ile Tyr Thr Pro Gln Pro Gly Phe His Leu Pro Leu Lys Leu
            275                 280                 285

gtg ctt tca gct aca ctg aca ggg acg gcc att tac cag gtg gcc ctg   1094
Val Leu Ser Ala Thr Leu Thr Gly Thr Ala Ile Tyr Gln Val Ala Leu
        290                 295                 300

ctg ctg ctg gtg ggc gtg gta ccc act atc cag aag gtg agg gca ggg   1142
Leu Leu Leu Val Gly Val Val Pro Thr Ile Gln Lys Val Arg Ala Gly
    305                 310                 315

gtc acc acg gat gtc tcc tac ctg ctg gcc ggc ttt gga atc gtg ctc   1190
Val Thr Thr Asp Val Ser Tyr Leu Leu Ala Gly Phe Gly Ile Val Leu
320                 325                 330                 335

tcc gag gac aag cag gag gtg gtg gag ctg gtg aag cac cat ctg tgg   1238
Ser Glu Asp Lys Gln Glu Val Val Glu Leu Val Lys His His Leu Trp
                340                 345                 350

gct ctg gaa gtg tgc tac atc tca gcc ttg gtc ttg tcc tgc tta ctc   1286
Ala Leu Glu Val Cys Tyr Ile Ser Ala Leu Val Leu Ser Cys Leu Leu
            355                 360                 365

acc ttc ctg gtc ctg atg cgc tca ctg gtg aca cac agg acc aac ctt   1334
Thr Phe Leu Val Leu Met Arg Ser Leu Val Thr His Arg Thr Asn Leu
        370                 375                 380

cga gct ctg cac cga gga gct gcc ctg gac ttg agt ccc ttg cat cgg   1382
Arg Ala Leu His Arg Gly Ala Ala Leu Asp Leu Ser Pro Leu His Arg
    385                 390                 395

agt ccc cat ccc tcc cgc caa gcc ata ttc tgt tgg atg agc ttc agt   1430
Ser Pro His Pro Ser Arg Gln Ala Ile Phe Cys Trp Met Ser Phe Ser
400                 405                 410                 415

gcc tac cag aca gcc ttt atc tgc ctt ggg ctc ctg gtg cag cag atc   1478
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                420                 425                 430

atc ttc ttc ctg gga acc acg gcc ctg gcc ttc ctg gtg ctc atg cct   1526
Ile Phe Phe Leu Gly Thr Thr Ala Leu Ala Phe Leu Val Leu Met Pro
            435                 440                 445

gtg ctc cat ggc agg aac ctc ctg ctc ttc cgt tcc ctg gag tcc tcg   1574
Val Leu His Gly Arg Asn Leu Leu Leu Phe Arg Ser Leu Glu Ser Ser
        450                 455                 460

tgg ccc ttc tgg ctg act ttg gcc ctg gct gtg atc ctg cag aac atg   1622
Trp Pro Phe Trp Leu Thr Leu Ala Leu Ala Val Ile Leu Gln Asn Met
    465                 470                 475

gca gcc cat tgg gtc ttc ctg gag act cat gat gga cac cca cag ctg   1670
Ala Ala His Trp Val Phe Leu Glu Thr His Asp Gly His Pro Gln Leu
480                 485                 490                 495

acc aac cgg cga gtg ctc tat gca gcc acc ttt ctt ctc ttc ccc ctc   1718
Thr Asn Arg Arg Val Leu Tyr Ala Ala Thr Phe Leu Leu Phe Pro Leu
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aat gtg ctg gtg ggt gcc ata gtg gcc acc tgg cga gtg ctc ctc tct   1766
Asn Val Leu Val Gly Ala Ile Val Ala Thr Trp Arg Val Leu Leu Ser
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gcc ctc tac aac gcc atc cac ctt ggc cag atg gac ctc agc ctg ctg   1814
Ala Leu Tyr Asn Ala Ile His Leu Gly Gln Met Asp Leu Ser Leu Leu
        530                 535                 540

cca ccg aga gcc gcc act ctc gac ccc ggc tac tac acg tac cga aac   1862
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    545                 550                 555

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Phe Leu Lys Ile Glu Val Ser Gln Ser His Pro Ala Met Thr Ala Phe
560                 565                 570                 575

tgc tcc ctg ctc ctg caa gcg cag agc ctc cta ccc agg acc atg gca   1958
Cys Ser Leu Leu Leu Gln Ala Gln Ser Leu Leu Pro Arg Thr Met Ala
                580                 585                 590

gcc ccc cag gac agc ctc aga cca ggg gag gaa gac gaa ggg atg cag   2006
Ala Pro Gln Asp Ser Leu Arg Pro Gly Glu Glu Asp Glu Gly Met Gln
            595                 600                 605

ctg cta cag aca aag gac tcc atg gcc aag gga gct agg ccc ggg gcc   2054
Leu Leu Gln Thr Lys Asp Ser Met Ala Lys Gly Ala Arg Pro Gly Ala
        610                 615                 620

agc cgc ggc agg gct cgc tgg ggt ctg gcc tac acg ctg ctg cac aac   2102
Ser Arg Gly Arg Ala Arg Trp Gly Leu Ala Tyr Thr Leu Leu His Asn
    625                 630                 635

cca acc ctg cag gtc ttc cgc aag acg gcc ctg ttg ggt gcc aat ggt   2150
Pro Thr Leu Gln Val Phe Arg Lys Thr Ala Leu Leu Gly Ala Asn Gly
640                 645                 650                 655
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gcc cag ccc t gagggcaggg aaggtcaacc cacctgccca tctgtgctga          2200
Ala Gln Pro

ggcatgttcc tgcctaccac ctcctccctc cccggctctc ctcccagcat cacaccagcc 2260
atgcagccag caggtcctcc ggatcactgt ggttgggtgg aggtctgtct gcactgggag 2320
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<212> PRT
<213> Homo sapiens

<400> 5
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Asp Tyr Ser Tyr Gly Ser Trp Tyr Ile Asp Glu Pro Gln Gly Gly Glu
            20                  25                  30
Glu Leu Gln Pro Glu Gly Glu Val Pro Ser Cys His Thr Ser Ile Pro
        35                  40                  45
Pro Gly Leu Tyr His Ala Cys Leu Ala Ser Leu Ser Ile Leu Val Leu
    50                  55                  60
Leu Leu Leu Ala Met Leu Val Arg Arg Arg Gln Leu Trp Pro Asp Cys
65                  70                  75                  80
Val Arg Gly Arg Pro Gly Leu Pro Arg Pro Arg Ala Val Pro Ala Ala
                85                  90                  95
Val Phe Met Val Leu Leu Ser Ser Leu Cys Leu Leu Leu Pro Asp Glu
            100                 105                 110
Asp Ala Leu Pro Phe Leu Thr Leu Ala Ser Ala Pro Ser Gln Asp Gly
        115                 120                 125
Lys Thr Glu Ala Pro Arg Gly Ala Trp Lys Ile Leu Gly Leu Phe Tyr
    130                 135                 140
Tyr Ala Ala Leu Tyr Tyr Pro Leu Ala Ala Cys Ala Thr Ala Gly His
145                 150                 155                 160
Thr Ala Ala His Leu Leu Gly Ser Thr Leu Ser Trp Ala His Leu Gly
                165                 170                 175
Val Gln Val Trp Gln Arg Ala Glu Cys Pro Gln Val Pro Lys Ile Tyr
            180                 185                 190
Lys Tyr Tyr Ser Leu Leu Ala Ser Leu Pro Leu Leu Leu Gly Leu Gly
        195                 200                 205
Phe Leu Ser Leu Trp Tyr Pro Val Gln Leu Val Arg Ser Phe Ser Arg
    210                 215                 220
Arg Thr Gly Ala Gly Ser Lys Gly Leu Gln Ser Ser Tyr Ser Glu Glu
225                 230                 235                 240
Tyr Leu Arg Asn Leu Leu Cys Arg Lys Lys Leu Gly Ser Ser Tyr His
                245                 250                 255
Thr Ser Lys His Gly Phe Leu Ser Trp Ala Arg Val Cys Leu Arg His
            260                 265                 270
Cys Ile Tyr Thr Pro Gln Pro Gly Phe His Leu Pro Leu Lys Leu Val
```

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        275                 280                 285
Leu Ser Ala Thr Leu Thr Gly Thr Ala Ile Tyr Gln Val Ala Leu Leu
    290                 295                 300
Leu Leu Val Gly Val Val Pro Thr Ile Gln Lys Val Arg Ala Gly Val
305                 310                 315                 320
Thr Thr Asp Val Ser Tyr Leu Leu Ala Gly Phe Gly Ile Val Leu Ser
                325                 330                 335
Glu Asp Lys Gln Glu Val Val Glu Leu Val Lys His His Leu Trp Ala
            340                 345                 350
Leu Glu Val Cys Tyr Ile Ser Ala Leu Val Leu Ser Cys Leu Leu Thr
        355                 360                 365
Phe Leu Val Leu Met Arg Ser Leu Val Thr His Arg Thr Asn Leu Arg
    370                 375                 380
Ala Leu His Arg Gly Ala Ala Leu Asp Leu Ser Pro Leu His Arg Ser
385                 390                 395                 400
Pro His Pro Ser Arg Gln Ala Ile Phe Cys Trp Met Ser Phe Ser Ala
                405                 410                 415
Tyr Gln Thr Ala Phe Ile Cys Leu Gly Leu Leu Val Gln Gln Ile Ile
            420                 425                 430
Phe Phe Leu Gly Thr Thr Ala Leu Ala Phe Leu Val Leu Met Pro Val
        435                 440                 445
Leu His Gly Arg Asn Leu Leu Leu Phe Arg Ser Leu Glu Ser Ser Trp
    450                 455                 460
Pro Phe Trp Leu Thr Leu Ala Leu Ala Val Ile Leu Gln Asn Met Ala
465                 470                 475                 480
Ala His Trp Val Phe Leu Glu Thr His Asp Gly His Pro Gln Leu Thr
                485                 490                 495
Asn Arg Arg Val Leu Tyr Ala Ala Thr Phe Leu Leu Phe Pro Leu Asn
            500                 505                 510
Val Leu Val Gly Ala Ile Val Ala Thr Trp Arg Val Leu Leu Ser Ala
        515                 520                 525
Leu Tyr Asn Ala Ile His Leu Gly Gln Met Asp Leu Ser Leu Leu Pro
    530                 535                 540
Pro Arg Ala Ala Thr Leu Asp Pro Gly Tyr Tyr Thr Tyr Arg Asn Phe
545                 550                 555                 560
Leu Lys Ile Glu Val Ser Gln Ser His Pro Ala Met Thr Ala Phe Cys
                565                 570                 575
Ser Leu Leu Leu Gln Ala Gln Ser Leu Leu Pro Arg Thr Met Ala Ala
            580                 585                 590
Pro Gln Asp Ser Leu Arg Pro Gly Glu Glu Asp Glu Gly Met Gln Leu
        595                 600                 605
Leu Gln Thr Lys Asp Ser Met Ala Lys Gly Ala Arg Pro Gly Ala Ser
    610                 615                 620
Arg Gly Arg Ala Arg Trp Gly Leu Ala Tyr Thr Leu Leu His Asn Pro
625                 630                 635                 640
Thr Leu Gln Val Phe Arg Lys Thr Ala Leu Leu Gly Ala Asn Gly Ala
                645                 650                 655
Gln Pro
```